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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,271	11/13/2003	Kenichiro Naito	1761.1051	5658

21171 7590 10/16/2006

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EXAMINER

KRAUSE, JUSTIN MITCHELL

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,271

Applicant(s)

NAITO ET AL.

Examiner

Justin Krause

Art Unit

3682

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 8, 2006 has been entered.

DETAILED ACTION

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Mutoh et al. (US Patent 6,068,408).

Mutoh discloses a ball retaining ring comprising:

-a ring-shaped or arcuate retainer body (see for example, figure 25 or abstract)
having inner and outer peripheral surfaces opposite to each other; and

-a plurality of pockets defined in the retainer body so as to open at the inner and outer peripheral surfaces of the retainer body and spaced from each other in a direction circumferentially thereof for rollingly retaining corresponding balls therein; (abstract)

-wherein radial sides of an inner surface of each of the pockets that are opposite to each other in a radial direction of the ball retainer are defined as spherical ball bearing surfaces to which each ball contacts; (abstract, figures 5 and 6)

-wherein intermediate portions of the inner surface of each pocket with respect to the radial direction are defined as circumferential non-contact surface areas where the corresponding ball is prevented from contacting (8); and

-wherein substantially all edges of the ball bearing surfaces of the inner surface of each pocket, which contact the ball, are chamfered edges (abstract).

Regarding claim 4, a radial thickness of a portion of the retainer body adjacent the pocket is greater than a radial thickness of the retainer body not adjacent each pocket (Fig 11).

Regarding claim 5, respective portions of one axial end of the retainer body where the corresponding pockets are defined are each provided with a pair of projections (fig 25, 12), the projections defining part of the inner surface of the pocket.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mutou (hereafter referred to as '408) in view of Mutou et al (US Patent 6,074,099, hereafter referred to as '099 to avoid confusion).

Regarding claim 2, Mutou '408 discloses all of the claimed subject matter as described above but does not disclose intersecting oil reservoir grooves extending radially.

Mutou '099 teaches radially extending oil reservoir grooves (20) to provide a means for efficiently supplying lubricant to the clearances between the cage and the balls. (Col 4, lines 30-34).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to add radially extending oil reservoir grooves to the bearing retainer of Mutou '408, creating a retainer with intersecting oil reservoir grooves, the motivation would have been to provide means for efficiently supplying lubricant to the clearances between the cage and balls.

Regarding independent claims 6 and 7, all of the claimed subject matter has been described above in the rejections of claims 1, 2, 4 and 5.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mutou '408 in view of Yamamoto et al (US 2003/0012461).

Mutou discloses all of the claimed subject matter as described above.

Mutou does not disclose a bottom of the inner surface of each pocket is formed with a bottom oil reservoir groove of a generally concave shape.

Yamamoto teaches a ball retainer with a bottom oil reservoir groove (11) of a generally concave shape so that feeding of lubricant can be facilitated (Paragraph 0031).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Mutou and incorporate a bottom oil reservoir groove of a generally concave shape as taught by Yamamoto to facilitate feeding of lubricant.

Response to Arguments

7. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

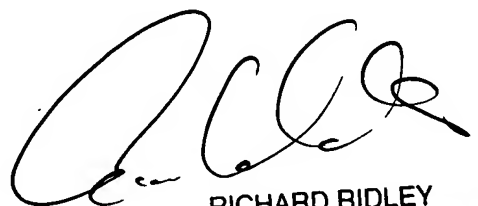
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Krause whose telephone number is 571-272-3012. The examiner can normally be reached on Monday - Friday, 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMK
9/21/06

A handwritten signature in black ink, appearing to read 'Richard Ridley', is written over a printed name and title.

RICHARD RIDLEY
SUPERVISORY PATENT EXAMINER